

## Classification of Periodontal Diseases Part II

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## Classification of Periodontal Diseases

### Diseases of Supporting Structures Periodontitis

#### Definition:

Inflammation of supporting tissues of teeth. Usually a progressively destructive change leading to loss of bone and periodontal ligament. An extension of inflammation from gingiva into the adjacent bone and ligament.

## Classification of Periodontal Diseases

### Periodontitis

- n Considered to be a **multifactorial disease** in which the normal balance between microbial plaque and host response is disrupted due to:
  - Changes in **plaque composition**.
  - Changes in the **host response**.
  - **Environmental and behavioral influences** that can affect both plaque and host response
  - Possible **genetic basis** to the susceptibility to periodontal disease.

## Classification of Periodontal Diseases

### Chronic Periodontitis

#### Definition:

An infectious disease resulting in inflammation within the supporting tissues of the teeth, progressive attachment and bone loss.

Replaces the older term "**adult periodontitis**" or "**chronic adult periodontitis**"

## Classification of Periodontal Diseases

### Chronic Periodontitis

#### Characteristics:

- n Most prevalent in Adults, but can occur in children and adolescents.
- n Amount of destruction is consistent with the presence of local factors.
- n Associated with variable microbial pattern.
- n Slow to moderate rate of progression, but may have period of rapid progression.

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## Classification of Periodontal Diseases

### Chronic Periodontitis

#### Characteristics: (cont')

- n Can be further classified on the basis of extent and severity.
- n Can be associated with local predisposing factors (e.g., tooth-related or iatrogenic factors).
- n May be modified by and /or associated with systemic diseases (e.g., diabetes mellitus, HIV infection).
- n Can be modified by environmental factors such as cigarette smoking and emotional stress.

## Classification of Periodontal Diseases

### Chronic Periodontitis

#### General Clinical Features:

- n supra- & sub- gingival plaque accumulation that is frequently associated with calculus formation.
- n gingival inflammation:
  - color:
    - n range from pale-red to magenta.
  - consistency:
    - n Slightly-moderate swollen (edematous) OR
    - n Thickened, fibrotic margin (as a result of long-standing, low-grade inflammation).
  - contour:
    - n loss of stippling,
    - n rolled margins
    - n flattened or cratered papilla.



## Classification of Periodontal Diseases

### Chronic Periodontitis

#### General Clinical Features: (cont.)

- n Periodontal pocket formation with variable depth.
- n Bleeding upon probing (BOP)
- n Tooth mobility (often appears in advanced cases when bone loss has been considerable).
- n Horizontal and/or vertical bone loss.
- n Usually Painless.
- n Occasionally, pain may be present:
  - Dull pain
  - Pain Radiating deep into the jaw
  - Gingival tenderness or "itchiness" (associated with food impaction)



## Classification of Periodontal Diseases

### Chronic Periodontitis

#### Disease Distribution:

n chronic periodontitis is a SITE-SPECIFIC DISEASE:

- clinical signs of chronic periodontitis are considered to be due to the direct, site specific effect of subgingival plaque accumulation.
- therefore, clinical signs of disease may occur on one surface of a tooth while other surfaces maintain normal attachment level.



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## Classification of Periodontal Diseases

### Chronic Periodontitis

#### Distribution & Severity:

##### – Extent

- n Localized <30% of sites affected.
- n Generalized >30% of sites affected

##### – Severity:

- n Slight (early): 1-2 mm CAL
- n Moderate: 3-4 mm CAL
- n Severe (advanced): >5 mm CAL

## Classification of Periodontal Diseases

### Chronic Periodontitis

How to write the diagnosis statement:

Extent + Severity + Chronic Periodontitis

- Localized early/moderate/advanced chronic periodontitis
- Generalized early/moderate/advanced chronic periodontitis.

## Classification of Periodontal Diseases

### Chronic Periodontitis

- n Most prevalent form of periodontitis.
- n 53% prevalence using a threshold of CAL>3mm in at least one site.
- n Prevalence Increase with age:
  - Age 30-39 35.7%
  - Age 80-90 89.2%.

## Classification of Periodontal Diseases

### Chronic Periodontitis



Generalized Advanced Chronic Periodontitis

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## Classification of Periodontal Diseases

### Chronic Periodontitis



Generalized Advanced Chronic Periodontitis

## Classification of Periodontal Diseases

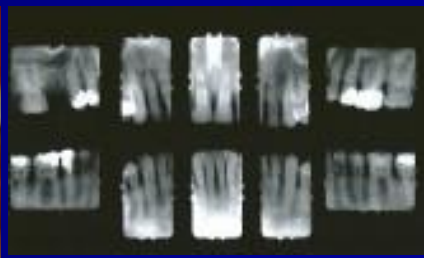
### Chronic Periodontitis



Generalized Advanced Chronic Periodontitis

## Classification of Periodontal Diseases

### Chronic Periodontitis



Generalized Advanced Chronic Periodontitis



## Classification of Periodontal Diseases

### Aggressive Periodontitis

#### Definition:

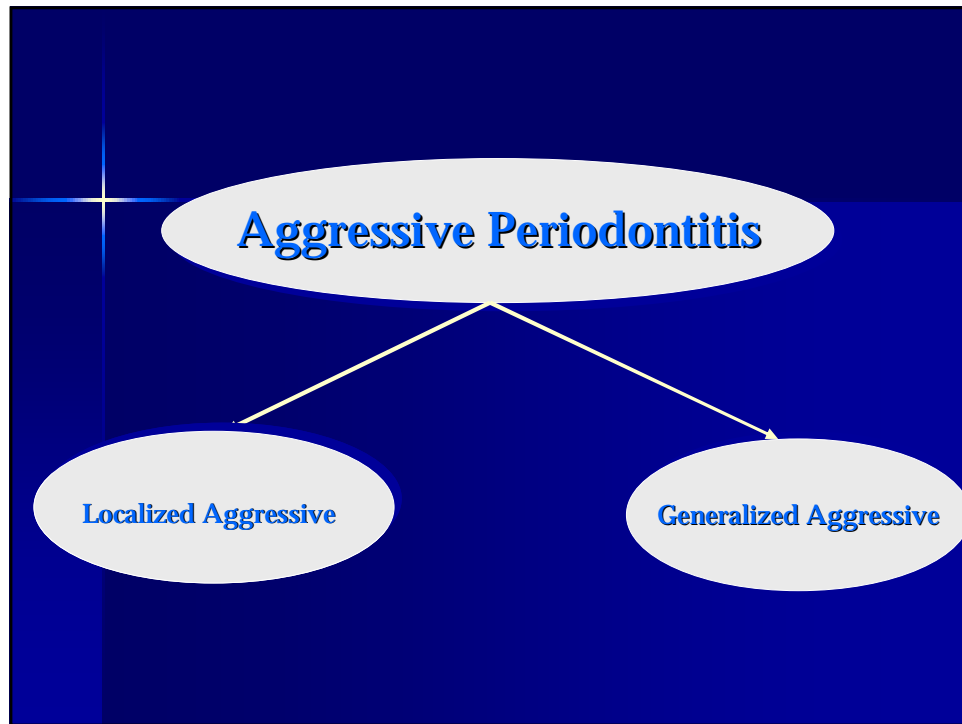
A specific type of periodontitis with clearly identifiable clinical and laboratory findings that make it sufficiently different from Chronic Periodontitis.

## Classification of Periodontal Diseases

### Aggressive Periodontitis

#### COMMON features of Aggressive Periodontitis:

- Except for the presence of periodontitis, patients are otherwise **clinically healthy**.
- Rapid attachment loss and bone destruction.
- Familial aggregation.



## Classification of Periodontal Diseases

### Aggressive Periodontitis

Features of Localized Aggressive Periodontitis (formerly called localized juvenile periodontitis):

- Age of onset around puberty
- Robust serum antibody response to infecting agents.
- Clinically, Localized first molar/incisor presentation with interproximal attachment loss on at least two permanent teeth, one of which is a first molar and involving no more than two teeth other than first molars and incisors.

## Classification of Periodontal Diseases

### Aggressive Periodontitis

#### Features of Localized Aggressive Periodontitis

(cont.):

- § Progress rapidly; rate of bone loss is 3-4 times faster than that of chronic periodontitis.
- § Lack of clinical inflammation of the gingiva despite presence of deep periodontal pocket.
- § The amount of plaque on the affected teeth is minimal which seems to be inconsistent with the amount of periodontal destruction.



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## Classification of Periodontal Diseases

### Aggressive Periodontitis

#### Features of Localized Aggressive Periodontitis (cont.):

- § Distolabial migration of the maxillary Incisors;
- § Increase mobility of first molars.
- § Pain characteristics are similar to that of chronic periodontitis.
- § In some patients, progression of attachment loss and bone loss may be self-asserting.



## Classification of Periodontal Diseases

### Aggressive Periodontitis

#### Radiographic Features of Localized Aggressive Periodontitis (cont.):

##### Classic diagnostic sign:

- Vertical loss of bone around first molars and incisors beginning around puberty in otherwise healthy teenagers.
- Also, an arc-shaped loss of bone extending from the distal surface of second premolar to mesial surface of second molar



## Classification of Periodontal Diseases

### Aggressive Periodontitis

#### Features of Localized aggressive periodontitis (cont')

- n Low prevalence: 0.1-0.5%
- n Blacks are at higher risk than whites.
- n Black males 2.9 times likely to have the disease than black females.
- n White females more likely to have the disease than white males.

## Classification of Periodontal Diseases

### Aggressive Periodontitis

Case of Localized Aggressive Periodontitis  
In 18-year-old female



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## Classification of Periodontal Diseases

### Aggressive Periodontitis

#### Features of Generalized Aggressive

**Periodontitis:** (formerly called generalized juvenile periodontitis or rapidly progressive periodontitis)

- n Usually affecting persons under 30 years of age, but patients may be older.
- n Poor serum antibody response to infecting agents.
- n Pronounced episodic nature of the destruction of attachment and alveolar bone.
- n Generalized inter-proximal attachment loss affecting at least three permanent teeth other than first molars and incisors.



# Classification of Periodontal Diseases

## Aggressive Periodontitis

### Features of Generalized Aggressive Periodontitis (Cont'):

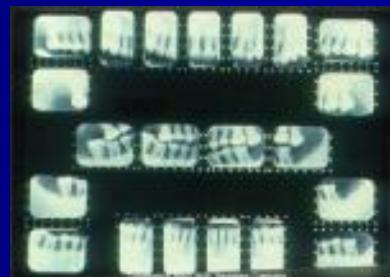
- n Amount of plaque is not consistent with amount of periodontal destruction.
- n Prevalence:
  - In untreated periodontitis in Sri Lankan population, 8% of population had rapid progression of periodontal disease (Loe, et al. 86)
  - In US. Survey (age 14-17) 0.13% had generalized aggressive periodontitis.
  - Blacks @ higher risk than whites and males more than females.



# Classification of Periodontal Diseases

## Aggressive Periodontitis

### Generalized Aggressive Periodontitis



## Classification of Periodontal Diseases

### Refractory Periodontitis

#### Definition:

A condition where one or more forms of periodontitis are unresponsive to treatment despite excellent patient compliance and delivery of periodontal therapy that ordinarily is successful in arresting the progression of periodontitis.

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## Classification of Periodontal Diseases

### Diseases of Supporting Structures, Refractory Periodontitis

A secondary descriptor used with various categories of periodontitis:

"Refractory Chronic Periodontitis".

"Refractory Aggressive Periodontitis".

## Classification of Periodontal Diseases

### Necrotizing Ulcerative Periodontal Diseases

- n Necrotizing Ulcerative Gingivitis. (NUG)
- n Necrotizing Ulcerative Periodontitis.(NUP)

## Classification of Periodontal Diseases

### Necrotizing Ulcerative Periodontal Diseases

#### Necrotizing Ulcerative Gingivitis

##### Characteristics:

- n Interproximal necrosis and ulceration (punched-out cratered papillae).
- n Painful gingivae.
- n Bleeding (spontaneous or on slight provocation).
- n Pseudomembrane (fibrin, debris)
- n Fever, Malaise, lymphadenopathy variable fetor oris.





## Classification of Periodontal Diseases

### Necrotizing Ulcerative Periodontal Diseases

#### Necrotizing Ulcerative Gingivitis

Secondary Etiology:

- n Impaired Chemotaxis
- n Poor Oral Hygiene
- n Alcohol
- n Smoking
- n Malnutrition
- n Stress



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## Classification of Periodontal Diseases

### Necrotizing Ulcerative Periodontal Diseases

- n An infection characterized by necrosis of gingival tissues, periodontal ligament, and alveolar bone. These lesions are most commonly seen in individuals with systemic diseases including, but not limited to HIV infection, malnutrition, and immunosuppression



- n **Signs and symptoms :**
  - Necrosis and ulceration of coronal part of interdental papilla and /or gingival margins
  - Deep, Crater-like osseous lesions most often located interdentally
  - Pain.
  - Mouth malodor (halitosis).
  - Systemic manifestations;
    - n Fever, malaise, and lymphadenopathy.

